NON-PUBLIC?: N
ACCESSION #: 8803240047
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Surry Power Station, Unit 1 PAGE: 1 of 3

DOCKET NUMBER: 05000280

TITLE: Reactor Trip Due To Personnel Failing to Follow Procedure
EVENT DATE: 02/16/88 LER #: 88-003-00 REPORT DATE: 03/17/88

OPERATING MODE: N POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: D. L. Benson, Station Manager TELEPHONE #: 804-357-3184

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On February 16, 1988 at 1143 hours, with Unit 1 at 100% power, a reactor trip occurred as a result of a Nuclear Instrumentation System (NIS) power range Lo setpoint Hi flux and NIS intermediate range Hi flux trip signals. Operators followed appropriate plant procedures and quickly stabilized the plant following the trip. At the time of the reactor trip, instrument technicians were performing a periodic test (PT 8.1) on the reactor protection system logic. During performance of the test the technician performed a procedural step in the wrong train of the reactor protection system. When the step was performed from the incorrect test rack, the permissive P-10 was initiated, generating a trip signal. The instrument technicians returned the switches in the protection cabinet to the correct positions. A peer group review of this event and its contributing factors was conducted by the instrument technicians. A Human Performance Evaluation System review has been performed.

(End of Abstract)

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1.0 Description of the Event

On February 16, 1988 at 1143 hours, with Unit 1 at 100% power, a reactor trip occurred as a result of a Nuclear Instrumentation System (NIS) power range Lo setpoint Hi flux and NIS intermediate range Hi flux trip signals. At the time of the reactor trip, instrument technicians were performing a periodic test (PT 8.1) on the reactor protection system logic.

Immediately following the reactor trip, operators noted that control and protection systems functioned properly with the exceptions that the source range nuclear instrumentation did not automatically reinstate, and a somewhat greater than expected Reactor Coolant System (RCS) cooldown. (Actual final temperature 539 degrees Fahrenheit, expected final temperature 547 degrees Fahrenheit.) Operators followed appropriate plant procedures and quickly stabilized the plant following the trip.

2.0 Safety Consequences and Implications

During this event, both trains of reactor protection functioned as designed to trip the unit on the signal they received. Since a reactor trip from 100% power is an analyzed event in the Updated Final Safety Analysis Report, the health and safety of the public were not affected.

3.0 Cause

The cause of this event was personnel error. During performance of the periodic test, the technician performed a procedural step in the wrong train of the reactor protection system. When the step was performed from the incorrect test rack, the permissive P-10 was initiated, generating a trip signal.

One intermediate range channel of nuclear instrumentation was under-compensated for gamma contribution; this prevented the source range channels from automatically reinstating.

Due to cold weather, the auxiliary feedwater (AFW) was colder than usual. The plant is designed such that

after a reactor trip, AFW is pumped to the steam generators until the steam generator levels reach a specified point. A major contributor to the greater than expected RCS cooldown was the colder AFW that was pumped to the steam generators.

4.0 Immediate Corrective Action

The operators followed appropriate emergency procedures to ensure that the plant was in a stable condition. This included manually reinstating the source range, closing the main steam trip valves to maintain primary temperature, and maximizing charging flow to maintain pressurizer level. Also, the Shift Technical Advisor performed the critical function status tree reviews to ensure specific plant parameters remained within safe bounds.

5.0 Additional Corrective Action(s)

The instrument technicians returned the switches in the protection cabinet to the correct positions. The intermediate range NIS channels were recalibrated. A post trip review was conducted following the trip and an investigation of the greater than expected RCS cooldown was conducted.

6.0 Action(s) Taken to Prevent Recurrence

A peer group review of this event and its contributing factors was conducted by the instrument technicians. A Human Performance Evaluation System review has been performed.

7.0 Similar Events

Unit 2 LER: 84-012

8.0 Manufacturer/Model Number

N/A

VIRGINIA ELECTRIC AND POWER COMPANY

Surry Power Station
P.O. Box 316
Surry, Virginia 23883

March 17, 1988

U.S. Nuclear Regulatory Commission Serial No.: 88-008
Document Control Desk Docket No.: 50-280
016 Phillips Building Licensee No.: DPR-32
Washington, D.C. 20555

Gentlemen:

Pursuant to Surry Power Station Technical Specifications, Virginia Electric and Power Company hereby submits the following Licensee Event Report for Surry Unit 1.

REPORT NUMBER

88-003-00

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be reviewed by Safety Evaluation and Control.

Very truly yours,
/s/ David L Benson
David L. Benson
Station Manager

Enclosure

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Regional Administrator
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